



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/675,140	09/30/2003	Anish Goel	0492611-0482	5719
24280 7590 01/12/2007 CHOATE, HALL & STEWART LLP TWO INTERNATIONAL PLACE BOSTON, MA 02110			EXAMINER MCCRACKEN, DANIEL	
			ART UNIT 1754	PAPER NUMBER
SHORTENED STATUTORY PERIOD OF RESPONSE			MAIL DATE	DELIVERY MODE
3 MONTHS			01/12/2007	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

8

<b>Office Action Summary</b>	<b>Application No.</b> 10/675,140	<b>Applicant(s)</b> GOEL ET AL.	
	<b>Examiner</b> Daniel C. McCracken	<b>Art Unit</b> 1754	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-40 is/are pending in the application.  
     4a) Of the above claim(s) 1-9 and 14-40 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 10-13 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
     a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____.  |

### DETAILED ACTION

Citation to the Specification will be in the following format (S. #, ¶) where # denotes the page number and ¶ denotes the paragraph number. Citation to patent literature will be in the form (Inventor #, LL) where # is the column number and LL is the line number.

#### *Response to Arguments*

Applicant's arguments filed 6/8/2006 have been fully considered but they are not persuasive. As to the rejection of Claims 10 and 11 under 35 U.S.C. §102(b) as being anticipated by Remo, Remo discloses a C<sub>60</sub> molecule bonding to carbon. (Remo 3, 1-7). As to the rejection of Claims 10 and 11 under 35 U.S.C. §102(b) as being anticipated by Taylor, claims are given their broadest interpretation consistent with the specification. *See* MPEP 2111, *et seq.* Thus, the bonding of a fullerene to another fullerene (i.e. polymerization) is consistent with this practice and the specification. *See, e.g.* (S. 2, 1) ("In yet another aspect, the invention is a fullerenic structure including a fullerene chemically bonded to a carbonaceous material.").

With respect to the rejections Claims 10-13 under 35 U.S.C. §102/103, the citation to the case law (i.e. *In re Brown*, 173 USPQ 685 (CCPA 1972) and *In re Fessman*, 180 USPQ 324 (CCPA 1974)) is withdrawn. However, the rejections are maintained under 35 U.S.C. 102(b). As to the Schwob reference, Applicants' specification provides an admission that Schwob discloses a fullerenic structure bonded to carbon black. *Compare* (Schwob 3, 32-38) ("A further subject of the invention is a method for the production of carbon black with a high content of the fullerenes mentioned at the beginning from carbon-containing compounds in a plasma by means of the above-described device according to the invention. The invention relates in particular to the production of carbon black with a high content of C<sub>60</sub> fullerenes.") *with* (S. 1, 4) ("Furthermore, fullerenes are difficult to detect and characterize because **they are often very strongly bound to, or within, the material with which they are condensed** in the synthesis process thereby preventing easy removal for chemical analysis.") (emphasis added).

As to the JP 11-140342<sup>1</sup> reference, Applicants' arguments are not persuasive. While Applicants have provided one sentence in the specification to state that bonding does not occur, *see* (S. 1, 5) ("This reference, however, does not establish the chemical bonding of fullerenes to carbon black."), Applicants' admission as discussed above taken with paragraph 11 of JP 11-140342 indicates that bonding does occur. *See* (JP 11-140342 4, [0011]). ("As fullerene to be bound to the surface of the carbon black particles, C<sub>60</sub>, C<sub>70</sub> and other known types of fullerene are usable. [sic]").

#### ***Claim Rejections - 35 USC § 102***

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 10-11 are rejected under 35 U.S.C. 102(b) as being anticipated by US 5,132,105 to Remo for reasons of record.

Claims 10-11 are rejected under 35 U.S.C. 102(b) as being anticipated by Taylor, R., and Walkton, R. M., *The Chemistry of Fullerenes*, 363 Nature 685 (June 24, 1993) for reasons of record.

Claims 10-13 are rejected under 35 U.S.C. 102(b) as being anticipated by US 6,358,375 to Schwob for reasons of record.

Claims 10-13 are rejected under 35 U.S.C. 102(b) as being anticipated by JP 11-140342 for reasons of record.

#### ***Conclusion***

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action

---

<sup>1</sup> Upon review, it would appear as if JP 11-140342 was incorrectly identified by the name "Yamamoto." For purposes of clarifying the record, the inventor listed on the translation of JP 11-140342 is "T. Ueda."

Art Unit: 1754

is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Daniel C. McCracken whose telephone number is (571) 272-6537. The examiner can normally be reached on Monday through Friday, 9 AM - 5 PM EST.

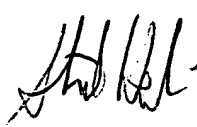
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stanley S. Silverman can be reached on (571) 272-1358. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Daniel C. McCracken

DCM



STUART L. HENDRICKSON  
PRIMARY EXAMINER